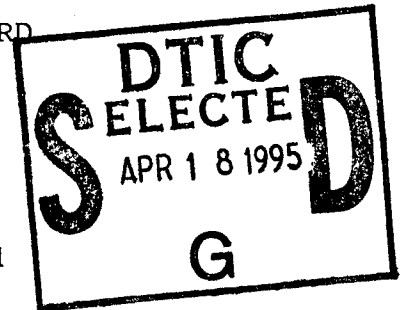NAVAL WAR COLLEGE
Newport, R.I.

DATA COLLECTION: THE ROAD TO COAST GUARD
OPERATIONAL ART

by

Steven P. How
Lieutenant Commander, U.S. Coast Guard

A paper submitted to the Faculty of the Naval War College in
partial satisfaction of the requirements of the Department of
Operations.

The contents of this paper reflect my own personal views and
are not necessarily endorsed by the Naval War College or the
Department of the Navy or the U.S. Coast Guard.

Signature:_____

16 June 1995

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to the President, Naval War College

Signature:_____ 13 Feb 95
         Faculty Advisor   Date

19950417 045

DTIC QUALITY INSPECTED 5

UNCLASSIFIED
Security Classification This Page

REPORT DOCUMENTATION PAGE

1. Report Security Classification: UNCLASSIFIED	
2. Security Classification Authority:	
3. Declassification/Downgrading Schedule:	
4. Distribution/Availability of Report:	DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

5. Name of Performing Organization: Joint Military Operations Department

6. Office Symbol: 1C	**7. Address:** Naval War College, 686 Cushing Rd., Newport, RI 02841-5010

8. Title (Include Security Classification): UNCLASSIFIED
DATA COLLECTION: THE ROAD TO COAST GUARD OPERATIONAL ART

9. Personal Authors: S. P. HOW, LCDR, USCG

10. Type of Report: Final	**11. Date of Report:** February 13, 1995

12. Page Count: 16

13. Supplementary Notation: A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

14. Ten key words that relate to your paper: COAST GUARD OPERATIONAL ART

15. Abstract: The U.S. Coast Guard, faced with decreasing budget resources, must achieve every operational efficiency possible. The Coast Guard's planning processes, operational mission execution and acquisition systems inadequately coordinate historical data and lessons learned to benefit from cumulative experience. An essential first step to adopting operational art is to create and mandate more robust use and management of data. Systems such as CGULLS, a sub-system of JULLS, should be mandated for service-wide use as a compatible computer terminal system comes on line. By adopting operational art concepts and systems, based on lessons learned and data collection, the Coast Guard can make a more convincing case of its effectiveness carrying out national mandates as well as communicating resource needs to Congress.

16. Distribution / Availability of Abstract:	Unclassified	Same As Rpt	DTIC Users

18. Abstract Security Classification: UNCLASSIFIED

19. Name of Responsible Individual: Chairman, Joint Military Operations Department

20. Telephone: (401) 841-3414/4120	**21. Office Symbol:** 1C

Security Classification of This Page_UNCLASSIFIED_____

Abstract

The U.S. Coast Guard, faced with decreasing budget resources, must achieve every operational efficiency possible. The Coast Guard's planning processes, operational mission execution and acquisition systems inadequately coordinate historical data and lessons learned to benefit from cumulative experience. An essential first step to adopting operational art is to create and mandate more robust use and management of data. Systems such as the Coast Guard Joint Universal Lessons Learned System (CGULLS), a sub-system of the Joint Universal Lessons Learned System (JULLS), should be mandated for service-wide use as a compatible computer terminal system comes on line. By adopting operational art concepts and systems, based on lessons learned and data collection, the Coast Guard can make a more convincing case of its effectiveness carrying out national mandates as well as effectively communicating resource needs to Congress.

Introduction

In an effort to evaluate Coast Guard operational art, I tried to focus on the Mariel boat lift. It was relevant to recent migrant operations off Haiti and Cuba. As the largest post WWII Coast Guard operation up to its time, records should have been ample to evaluate. To my frustration the only source, except for a few Naval Proceedings articles, to be found was Alex Larzelere's book, Castro's Ploy - America's Dilemma: The 1980

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Cuban Boatlift. The Operation Plans are gone, no lessons learned can be located and although a plethora of material is written evaluating national policy, the Coast Guard role is virtually absent. The same situation exists regarding the Exxon Valdez oil spill. A report exists which evaluates why it happened, and how to prevent it from happening again. It doesn't offer the operational matter from which operational art can be analyzed. All records with the essence of mission execution were shipped to the Federal Archives in Anchorage, Alaska.[1] This constructs a very difficult barrier to operational planning. Portions of these records have been scanned onto a CD-ROM terminal at Marine Safety Office Anchorage, but they are not networked beyond this terminal.[2] These experiences caused me to refocus on data collection and record maintenance by the Coast Guard. Operational art cannot be developed without record and data collection.

A Case for a Coast Guard Operational Art

The Coast Guard is undertaking perhaps its most extensive cutbacks since WWII. "Downsizing", "rightsizing" and "streamlining" are the latest terms to explain the current generation of budget cuts. The service must just as vigorously pursue efficiency in operational execution.

Ultimately the service must achieve maximum efficiencies accomplishing standing missions, justify sufficient operational reserve resources to respond to "surges" while sustaining adequate mission success among all priority responsibilities. Is

there value added to applying operational art concepts to Coast Guard missions? Unfortunately the absence of recorded data prohibits measuring mission <u>efficiency</u> and determining if operational art adds value. This absence of data has enormous implications considered in the whole context of operational efficiency. Processes relative to force planning -- budgeting, acquisition of manpower and hardware, training etc. are suspect when records are incomplete.

Consider the Joint Task Force 4 (JTF-4), a counter-narcotics command, headquartered in Key West. For several years Coast Guard Cutter Commanding Officers articulated frustration with the JTF's inflexibility when operating in the deep Caribbean.[3] This group constantly communicated their belief that "boxes" may have worked for other missions but not counter-narcotics. They were suggesting adoption of the operational art concept suggesting greater movement. Since U. S. Coast Guard corporate knowledge wasn't converted to doctrine or an operational art, the Navy couldn't accept this "verbal input" and it took years of frustration by both the Navy and the Coast Guard to refine the operational art to fit the mission. To many rotating commanders needed documented evidence to persuade them to move beyond traditional U. S. Navy operational approaches to the mission. Ultimately the flexibility came along but this was based on Navy experience doing the operation. The years of reinventing the mission wheel meant weathering inefficiencies, resulting in less than optimal success. What does that mean? In this case, if

Coast Guard Commanding Officers couldn't prevail then narcotics may have unnecessarily entered the United States. If so, the responsibility belongs to the Coast Guard because data based corporate operational knowledge wasn't available to support an operational concept.

Following the aborted procurement of the Heritage Class Patrol Boat, a lessons learned report of procurement process was authored and the Coast Guard's Office of Acquisition chartered a study group to analyze the project. Concerned that the findings "offend higher ups" the group's work was destroyed.[4] The failure of the Heritage Class did focus the need for acquisition based on required operational capabilities (ROCs). Unfortunately the decision to "destroy" records denies future use of this case study and indicates an unhealthy segregation of data which is easy to purge as a means to avoid honest introspection.

The Coast Guard is in the process of developing a resource to replace its current fleet of deep water cutters (High Endurance Cutters/Medium Endurance Cutters -- HEC/MEC). A "Deep Water Roles" study is underway to determine ROCs for these ships. Did the Coast Guard learn from Heritage? Yes and no. As a result of the failure to acquire the Heritage Class Cutter, requirement based acquisition will be adhered to for this process. Currently the Coast Guard's "Deep Water Roles" study is struggling to develop ROCs to justify "intuitive" concepts because records and data are either incomplete or in unmanageable formats. More significant to the service and nation is the

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consequence of acquiring a resource that doesn't meet ROCs or failing to acquire proper resources because data didn't drive requirements. Leaders who will fill data gaps will naturally be influenced by personal bias which won't have the benefit of objective data. The Coast Guard is trying to recapture data by hiring contractors (costing hundreds of thousands of dollars) to find and analyze records or conduct surveys to develop data based operational requirements for the HEC/MEC replacement.[5]

The Coast Guard is also about to award a contract to build replacements to its 82 foot "Point" Class Patrol Boat. Interestingly the most complete data base for developing ROCs came not from the Coast Guard but from historical files of Casualty Reports (CASREPs) at the Naval Supply Depot (SPCC), Mechanicsburg. The Depot's data research librarian was able to easily access data and provide records as requested to suit the "customer needs" of the Coast Guard.[6]

Recently the Coast Guard conducted two enormous operations: ABLE MANNER and ABLE VIGIL to counter mass migration efforts from Haiti and Cuba respectively. Assistance from the Operations (law enforcement and fisheries) Office of Coast Guard Atlantic Area netted a discouragingly spartan archive of detailed execution plans from these operations.[7] Efforts to locate records of early versions of these plans through Commander Coast Guard District Seven (the Operational Commander for these crisis') were equally challenging.[8] No archives for the plans and execution orders developed during the Mariel boat lift of 1980 (or any other major

operation from the past) could be located among official Coast Guard held records. There may be some records which were previously transferred to Federal Archives but I couldn't verify this within the Coast Guard either from Atlantic Area, District Seven or Commandant (G-O)[9], or the Coast Guard Historians office[10]. Service experience is hollowed by the absence of these records. Without the resource of cumulative experience based on analysis of the operational record of after action reports and lessons learned, processes are at high risk of being dominated by re-invention and personal bias.

The ongoing absence of data contributes to the challenges facing HEC/MEC replacement and leads to contract cancellations such as the Heritage Class patrol craft. Fortunately for the nation the Navy is commissioning 17 Coastal Patrol craft and have 30 smaller Patrol Boats (about 82 ft in length) on the way. The nation must be able to rely on these assets if the Coast Guard can't justify resources in tough budgets.

Data collection can "...become a resource from which are fashioned innovative methods of information sharing...producing a deepened sense of collective responsibility and joint ownership, as access to ever-broader domains of information lend <u>new objectivity to data and preempt dictates of hierarchial authority</u>".[11]

Without adequate data, the Coast Guard <u>cannot</u> effectively apply operational art and thus is hampered in meeting national policy mandates.

The Commandant should maintain a prioritized list of CONPLANS which operational commanders are to be prepared to respond to. These should include existing plans such as oil spill responses, Maritime Defense (MARDEZ) operations and mass migration responses as well as emerging contingencies needing design. CONPLAN development, adopting deliberate and crisis planning processes, must be based on evaluation of operational sustainment capabilities and operational reserve capabilities in relation to what the Commandant describes as "surge" and "normal" mission response. Operational commanders, using operational the art "toolbox" to test, exercise or evaluate actual operations, would have a universally credible evaluation process to report resource deficiencies prohibiting CONPLAN execution. They would develop potential courses of action considering the effect of simultaneous demands (analogous to 2 MRCs) or simply in the context of effect on "standing missions". Lessons learned data from applying operational art tools such as sustaining lines of communication, application of "principles of war" (adapted as necessary for military operations other than war), vulnerabilities and weaknesses, phasing, sequencing etc would become the commanders justifying requirements for resources. Similar to DODs planning system (interrelationships of JOPES, JSPS, PPBS & Acquisition), program managers, budget drafters, designers, acquisition etc would make sure requirement based operational resources (developed from data based lessons learned

applying operational art) were requested and appropriated to meet CONPLAN requirements.

Ambitious steps would be taken to measure and evaluate processes and gain execution efficiencies enhancing CONPLANS. Deliberate and crisis planning processes (adopting operational art concepts) are consistent with "TQM" courses of continuous review and improvement. Measurements, based on operational lessons evaluations of proven operational concepts, captured in records, are the key basis to good planning. By adopting process oriented approaches to planning, the service can assure the best match of resources to task, more often than not realizing greater efficiencies (with less degradation to other responsibilities). Projects such as acquisitions of deep water cutters and patrol boats would be on sounder foundations.

The current Commandant of the Coast Guard has stated the Coast Guard always has more work to do than resources to do it.[12] To decide among options competing for resources, the Commandant could maintain a real-time hierarchy of obligations. Using data gathered from testing or exercising operational art concepts, he could report a national "cost" when resources are not sufficient to support standing operations due to "surges". Gaps based on operational art could be identified, reported and acted upon to assure national mandates (standing missions such as SAR, fisheries enforcement or counter narcotics) are not degraded during "surges". In the budgeting process a data based case (to

SECDOT, OMB, Congress etc) for additional resources would be politically more difficult to rebut.

Data collection reveals required operational capabilities (ROCs) justified through the application of operational art to design CONPLANs. Thus operational art is supported by data. The data analysis and CONPLAN lists would decrease the sinusoidal resource allocation which can resort when personality dominated planning can result in overly short term solutions.

How Full is the Data Glass?

Obviously the Coast Guard does a lot right. Throughout the service superb studies are conducted, data is gathered and systems exist to store it. Every program requires reports and some even support lessons learned data bases (Search and Rescue, Marine Safety, and Occupational Health as examples). Unfortunately since these data bases only reside in the respective sponsoring office, there isn't a central repository to enable broader access and ensure historical preservation.

There is great potential for bit of "continuous improvement" to Coast Guard data, collection and management.

The Coast Guard Historian's policy is to forward records to Federal Archives, he simply doesn't have the staff to maintain records in support of internal research. Since the historian resides in the "Community Relations" branch, of Coast Guard Headquarters, he lacks a mandate to apply service history to operational art or strategic planning. Evidence of the low corporate value given to historical record keeping became

apparent when the historian joked that the most accurate organizational records of the service prior to WWII are old telephone books.[13]

An officer, assigned to the Office of Operations at Coast Guard Headquarters, related the following story after his unsuccessful search for archives or lessons learned from prior major operations. Following a "nation building patrol" in the Western Pacific his ship had invested an enormous effort preparing the obligatory "after action report". Although distributed to Coast Guard Headquarters, upon arriving for his subsequent tour, he was surprised and discouraged to learn the Coast Guard maintained no repository of these reports (or if there is one its benefits from excellent OPSEC!) and they usually ended up being discarded following "routing".[14]

Not surprisingly many Commanding Officers have been calling for the elimination of after action reports.[15] This is reasonable if they are subject to various custodial waves of "rightsizing" by round-filing. To be of maximum value, after action reports must be collocated and broadly accessible.

Data collection is so poor that the Commandant (Cutter Management Branch) can't even locate reliable lists of former Commanding Officers when requested to honor on the occasions of decommissionings, reunions etc.[16]

A Research Fellow, from the National Defense University, wanting to analyze previous Coast Guard Budgets found the only complete records were located in a set of binders in a bookcase

in the lounge/coffee mess of the Commandant's Programs
Administration Office. No one could, with any degree of
confidence, say how far back the budget records went. The only
way to access the data was to go to that office to "use" the
binders. Wanting to view records of cutter employment (Abstracts
of Operations) he located a bookcase in the Coast Guard Office of
Operations, also at Coast Guard Headquarters, where the person
minding the office was unable to say if this was the only
"complete" record in existence. To analyze data the painstaking
process of "researching/finding" records had to be undertaken,
hoping all along that some zealous "neat-nick" hadn't discarded
them in a "streamlining" effort.[17]

Corporate Data Base

The problem described above has been lessened. The Coast
Guard Corporate Data system was developed initially in Fiscal
Year 1989 to input budget data for the Coast Guard's Chief of
Staff. With time Abstracts of Operations (numerical tallies of
time spent by units conducting missions), Personnel Allowance
Lists (billet distributions) and more financial records were
added. The intent of the system is to provide planning and
budget data to primary leaders, program managers and financial
managers. Although conceptually consideration has been given to
broadening data input, practically this is not likely simply
because of the time it would take to convert data and input it.
The current generation of computer work stations require
intensive management to keep up with changes to data collection

by the various sources.[18]   The Coast Guard mind-set was not

conducive to data collection since "Admirals don't like to share

data, and are unwilling to stick with standard formats for

reporting...Programs see data sharing as turf interference."[19]

Perhaps that Research Fellow enabled this incremental

improvement.

JULLS & CGULLS

The Coast Guard's most significant improvement capturing

valuable data would be realized by fully implementing the Joint

Universal Lessons Learned System (JULLS). JULLS is a lessons

learned data base management system (which includes an array of

after action reports inclusive of tactical, operational and

strategic levels). The system is intended to support operational

art by managing data to accomplish the following goals[20]:

1. Learn from past exercises and operations.

2. Avoid making the same operational mistakes again.

3. Construct future exercise objective quickly
   integrating lessons learned.

4. Track Remedial Action Reports.

5. Provide overall picture of objectives and result of
   an exercise or operation.

6. Assessment tool to evaluate the success of tested
   objectives.

7. Provide through associated systems planning
   assistance for exercises and operations.

The Coast Guard element of JULLS, CGULLS (CG for Coast

Guard), is the result of an exercise Remedial Action Report in

the mid-1980s and a GAO report critical of the service's failure

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to apply lessons learned from exercises.[21] CGULLS is mandated by COMDTINST M3110.19 for Coast Guard Readiness (Defense type) and Reserve exercises. Other participation is "encouraged". Study of the contents of CGULLS files reveals an almost total absence of "encouraged" input.[22] Input to JULLS requires a CD-ROM capable terminal linked to CGULLS. This capability is severely hindered since current Coast Guard computer work stations are not CD-ROM capable. Reports to JULLS must be submitted in a standard format, however CGULLS accepts a simpler standard format.[23] The Coast Guard expects to begin phasing in a new generation of computer work stations which could be capable of networking into CGULLS in 1996.[24]

A robust evaluation and lessons learned process is underway studying ABLE MANNER and ABLE VIGIL. As a result of discussions with Atlantic Area Operations and Planning Division, while researching this paper, they're considering imputing the report into CGULLS.[25] If so great.

JULLS/CGULLS was used successfully to develop and document lessons learned from Coast Guard operations responding to floods in the midwest in 1993 and response to Hurricane Andrew. When responding to Andrew the Coast Guard realized it hadn't adequately analyzed its response to Hurricane Hugo, so had to reinvent the wheel. The lessons from the midwest floods and Andrew are being applied to disaster relief plans throughout the Coast Guard. What made this succeed? In both these cases Coast Guard Readiness and Reserve personnel played key roles in the

responses. As pointed out earlier their familiarity with JULLS/CGULLS was mandated by Commandant Instruction. Since their offices are authorized, equipped and networked to JULLS/CGULLS with Navy DOS based computer terminals, they can overcome the barriers presented by the normal Coast Guard Standard Computer Work Station which isn't DOS based, CD-ROM capable or networked to JULLS).[26]

Despite the advances made in the Corporate Data Base and CGULLS, the Coast Guard still lacks the essential data collection tools needed to support operational art -- and with it budgeting and acquisition.

Data Recommendations

Mathematicians have a wonderful use for the word "elegance". My solution is offered analogous to the mathematician.

1. Mandate use of CGULLS as a repository and data management for the operational art of the Coast Guard. Assign an office as program manager with modest staff or "out source" its management. Input should mirror DODs.

2. Form a system repository to manage system data.

3. Make these systems universally open within the service to the extent security allows, to enable and demand drawing from the data to support planning. This is arguably the most important element to ensure perceptions of "turf", personal agendas, internal cannibalization etc can be replaced with a "Team Coast Guard" approach motivated by a higher mission of quality for the nation.

4. Make the data submission process a part of standard format for required data (part of OPLANS etc). For example make it a required message and electronic plain language address (PLAD) for certain types of data so it is deposited from the source.

Conclusion

The Coast Guard is responsible for carrying out national mandates. "Operational art" impliments these mandates. The daunting Federal budget deficit will continue to subject all government functions to unprecedented scrutiny. Agencies not fully justifying themselves will face extinction or have mandates shifted elsewhere. The Coast Guard needs to aggressively adopt operational art as a means to achieve maximum efficiencies in operational execution, improve planning by exploiting lessons learned and develop appropriate required operational capabilities to acquire the right resources. By applying concepts and methods forged from the development of operational art the Coast Guard can achieve invaluable augmentation to personal experience and judgement.

As Larzelere said in his book: When "...no major study of (Mariel) appeared...I felt it was important to comprehensively review...(so) we can consider how to deal with another...for I have no doubt the nation will face such an event again sometime in the future." and "...we should take diligent care to <u>never forget</u> what happened...".[27] Every great institution honors its history by collecting, studying and applying it. The judicial

system honors cumulative case law. The Department of Defense Services value the wisdom of Sun Tzu and analyze wars from the times of Thucydides onward. Shouldn't the Coast Guard adopt a similar respect for history and lessons? The Commandant of the Coast Guard has called for his service to be the world's premier maritime service. By collecting, studying and applying service history -- "data", the Coast Guard will enlist the collective wisdom of the legions who have gone before. Failing to save service experience is at the least an arrogant disdain for the wisdom of those who given so much in support of "Semper Paratus"! Worse it risks letting down America by not doing the right things right.

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2.   Ibid.

3.   Interviews with CDR J. J. Hathaway, USCG,Commanding Officer, USCGC <u>LEGARE</u> (WMEC (912) August 1992. CDR G. L. Snyder, USCG, Commanding Officer, USCGC <u>LEGARE</u> (WMEC (912) March 1994. CAPT P. M. Regan, USCG, Coast Guard Advisor to the President, Naval War College, Newport RI: 18 January 1995.

4.   Anonymous Interview Office of Acquisition, U. S. Coast Guard Headquarters, Washington DC: 3 February 1995.

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7.   Telephone conversations with LCDR Barry Smith, USCG, Office of Law Enforcement Operation, U. S. Coast Guard Atlantic Area, New York, NY: 13 December 1994, 16 December 1994, 20 January 1995.

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10.   Telephone conversation with Dr. Robert Browning, U. S. Coast Guard Historian, U. S. Coast Guard Headquarters, Washington DC: 13 December 1994.

11.   Zuboff, Shoshana, <u>In The Age of the Smart Machine</u>(New York: Basic Book, Inc. Publishers, 1988), p. 7.

12.   Statement, in response to a question, by Admiral Robert Kramek, Commandant U. S. Coast Guard, Naval War College, Newport RI, 29 November 1994.

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18.   Telephone conversation with Ms. Sandra Jamula, Office of Command, Control and Telecommunications, Computer Telecommunications Branch, U. S. Coast Guard Headquarters, Washington DC, 3 February 1995.

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20.   U. S. Department of Defense, _Joint Universal Lessons Learned User Manual_, version 5.1, 5 August 1994.

21.   Telephone conversation with LT William Ellis, Project Manager, Coast Guard Universal Lessons Learned System, Office of Readiness and Reserve, U. S. Coast Guard Headquarters, Washington DC, 19 January 1995.

22.   Review by author from NWC Classified Library terminal

23.   Ibid.

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25.   Telephone conversation with LCDR Barry Smith, USCG, Office of Law Enforcement Operations, U. S. Coast Guard Atlantic Area, New York, NY, 20 January 1995.

26.   Telephone conversation with LT Mike Fijalka, USCG, Office of Readiness, Maritime Defense Zone Atlantic, New York, NY, 31 January 1995.

27.   Larzelere, Alex, <u>Castro's Ploy -- America' Dilemma: The 1980 Cuban Boatlift</u>,(National Defense University Press, Washington DC, 1988 pp. xxii & 444.

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